as each feature may be combined with any or all of the other features in accordance with the invention.

Other embodiments will occur to those skilled in the art and are within the following claims:

What is claimed is:

1. A system, of the type having a plurality of transceiver units for generating an alarm when a child transceiver unit is more than a predetermined distance away from a parent transceiver unit, the system comprising:

(a) a portable parent unit;

(b) a first transmitter portion, disposed in the parent unit, the first transmitter portion having:

(i) a first rf transmitter, operative at a first carrier frequency, having an output;

(ii) a signal generator for generating a first reference signal;

(iii) a first FM modulator, coupled to the first rf transmitter, for modulating the first carrier with the first reference signal;

(iv) a first digital encoder for digitally encoding the FM-modulated carrier with a digital signature to identify the output of the first transmitter;

(c) a portable child unit of a size permitting it to be worn by a human subject, the child unit having:

(i) a second receiver, tuned to the first carrier frequency, for receiving a signal broadcast from the output of the first transmitter;

(ii) a digital decoder for decoding the digital signature from the signal received by the second receiver and providing a decoded output;

(iii) an inhibitor arrangement, coupled to the digital decoder, for preventing transmission by the child unit unless the decoded output meets criteria stored in the child unit;

(iv) a second rf transmitter, operative at a second carrier frequency, and having an output; and

(v) a second FM modulator, coupled to the second rf transmitter and to the second receiver, for modulating the second carrier with a second reference signal having a prespecified phase relationship to the first reference signal as received by the second receiver;

(d) a first receiver portion, disposed in the parent unit, the first receiver portion having:

(i) a first receiver, tuned to the second carrier frequency, for providing an output of the demodulated second reference signal;

(ii) a distance resolver, coupled to the first receiver and the signal generator, for providing an output signal dependent on the phase relationship, between the first reference signal and the demodulated second reference signal, that is indicative of the distance between the child unit and the parent unit; and

(iii) an alarm, coupled to the distance resolver, triggered if the output signal from the distance resolver, exceeds a specified maximum distance.

2. A system according to claim 1, wherein the child unit further has an emergency button for causing the generation of an alarm signal for transmission to the parent unit.

3. A system according to claim 2, wherein the parent unit further has a range selection switch accessible to the user for specifying the maximum distance.

4. A system according to claim 1, wherein the parent unit further has a range selection switch accessible to the user for specifying the maximum distance.

* * * * *

5. A system of the type having a plurality of transceiver units for generating an alarm when a child transceiver unit is more than a predetermined distance away from a parent transceiver unit, the system comprising:

(a) a portable parent unit;

(b) a first transmitter portion, disposed in the parent unit, the first transmitter portion having:

(i) a first rf transmitter, operative at a first carrier frequency, having an output;

(ii) a signal generator for generating a first reference signal;

(iii) a first digital encoder for digitally encoding the carrier with a digital signature to identify the output of the first transmitter;

(iv) a first modulator, coupled to the first rf transmitter, for modulating the first carrier with the first reference signal;

(c) a portable child unit of a size permitting it to be worn by a human subject, the child unit having:

(i) a second receiver, tuned to the first carrier frequency, for receiving a signal broadcast from the output of the first transmitter;

(ii) a digital decoder for decoding the digital signature from the signal received by the second receiver and providing a decoded output;

(iii) an inhibitor arrangement, coupled to the digital decoder, for preventing transmission by the child unit unless the decoded output meets criteria stored in the child unit;

(iv) a second rf transmitter, operative at a second carrier frequency, and having an output; and

(v) a second modulator, coupled to the second rf transmitter and to the second receiver, for modulating the second carrier with a second reference signal having a prespecified phase relationship to the first reference signal as received by

the second receiver;

(d) a first receiver portion, disposed in the parent unit, the first receiver portion having:

(i) a first receiver, tuned to the second carrier frequency, for providing an output of the demodulated second reference signal;

(ii) a distance resolver, coupled to the first receiver and the signal generator, for providing an output signal dependent on the phase relationship, between the first reference signal and the demodulated second reference signal, that is indicative of the distance between the child unit and the parent unit; and

(iii) an alarm, coupled to the distance resolver, triggered if the output signal from the distance resolver exceeds a specified maximum distance.

6. A system of the type having a plurality of transceiver units for generating an alarm when a child transceiver unit is more than a predetermined distance away from a parent transceiver unit, the system comprising:

(a) a portable parent unit;

(b) a first transmitter portion, disposed in the parent unit, the first transmitter portion having:

(i) a first rf transmitter, operative at a first carrier frequency, having an output;

(ii) a signal generator for generating a first reference signal;

(iii) a first digital encoder for digitally encoding the carrier with a digital signature to identify the output of the first transmitter;

(iv) a first FM modulator, coupled to the first rf transmitter, for modulating the first carrier with the first reference signal;

(c) a portable child unit of a size permitting it to be worn by a human subject, the child unit having:

(i) a second receiver, tuned to the first carrier frequency, for receiving a signal broadcast from the output of the first transmitter;

(ii) a digital decoder for decoding the digital signature from the signal received by the second receiver and providing a decoded output;

(iii) an inhibitor arrangement, coupled to the digital decoder, for preventing transmission by the child unit unless the decoded output meets criteria stored in the child unit;

(iv) a second rf transmitter, operative at a second carrier frequency, and having an output; and

(v) a second FM modulator, coupled to the second rf transmitter and to the second receiver, for modulating the second carrier with a second reference signal having a prespecified phase relationship to the first reference signal as received

by the second receiver;

(d) a first receiver portion, disposed in the parent unit, the first receiver portion having:

(i) a first receiver, tuned to the second carrier frequency, for providing an output of the demodulated second reference signal;

(ii) a distance resolver, coupled to the first receiver and the signal generator, for providing an output signal dependent on the phase relationship, between the first reference signal and the demodulated second reference signal, that is indicative of the distance between the child unit and the parent unit; and

(iii) an alarm, coupled to the distance resolver, triggered if the output signal from the distance resolver exceeds a specified maximum distance.